

REMARKS

Claims 1-23, 26, 27, 31-36, 40 and 41 are all the claims pending in the application. Claims 1-10, 14-23, 26, 27, 31 and 32 are rejected. Claims 11-13, 33-38, 40 and 41 are withdrawn from consideration. Claims 1 and 31 are cancelled. Claim 2 is amended to place it into independent form and in better condition for allowance or appeal. No new limitations are added. Claims 23, 26 and 27 are amended to depend from independent claim 2, as parent claim 1 is now cancelled.

Applicants respectfully submit that the present amendment should be entered as it simply places claim 2 into independent form and adjusts the dependency of claims 23, 26 and 27. No substantive changes are made, such that no new issues are raised and no new search is required.

Claim Rejections – 35 U.S.C. § 102

Claims 1-10, 14-23, 26-27, 31 and 32 are rejected under 35 U.S.C. § 102 as being anticipated by Papadimitrakopoulos (5,946,550). This rejection is traversed for at least the following reasons.

Claims 1 and 31

As to claims 1 and 31, the rejection is moot since the claims have been cancelled.

Claims 2 and 32

With respect to independent claims 2 and 32, they expressly require a metal complex that comprises a chain of cations and anions, wherein each anion and cation comprises a metal atom and the ions are bonded such that charge carriers of the metal atoms are delocalized along the chain.

The Examiner asserts at page 3 of the Office Action that Papadimitrakopoulos discloses the expressly recited limitation, with reference to Figs. 6-8 and the disclosure at cols. 8-13.

However, as is clearly seen at cols. 7 and 8 of the patent, the chains are made by reacting metal atom-containing cations (e.g., Zn_2^+ Al_3^+) with a NON metal atom-containing component (e.g., bisquinoline). Applicants submit that there is no disclosure at the cited cols. 8-13 that teaches the formation of chains from metal-containing cations AND metal-containing anions,

such as the $\text{PT}(\text{NH}_2\text{R})_4$ divalent anions used in the material shown in Fig. 1 of the present application. The claim limitation clearly requires that “each anion and cation comprises a metal atom.” In the absence of this limitation, the claims cannot be anticipated. If the Examiner persists in the rejection, the Examiner is respectfully requested to explain the teaching on which the rejection is based.

Claims 3-10, 14-23, 26 and 27

These claims are patentable at least by virtue of their dependence from claim 2.

Claims 1-10, 14-23, 26-27, 31 and 32 are rejected under 35 U.S.C. § 102 as being anticipated by Fontana et al (“A Soluable Equivalent of the Supramolecular...”). This rejection is traversed for at least the following reasons.

Claims 1 and 31

As to claims 1 and 31, the rejection is moot since the claims have been cancelled.

Claims 2 and 32

With respect to independent claims 2 and 32, again they expressly require a metal complex that comprises a chain of cations and anions, wherein each anion and cation comprises a metal atom and the ions are bonded such that charge carriers of the metal atoms are delocalized along the chain.

The Examiner asserts at page 7 of the Office Action that Fontana et al discloses the expressly recited limitation, with reference to Fig. 1 and the disclosure in sections entitled “Experimental Section” and “Results and Discussion.” The Examiner also takes the position that the limitation in the claim preamble to a “switching device” is a use limitation and will be ignored.

The Examiner’s position in this regard is not correct under applicable law or regulation. See MPEP 2111.02. Whether called a switching device, a transistor or a FET, the claims are directed to an electronic device that is operative to switch. The MPEP instructs that the preamble must be read in the light of the specification and the claim as a whole to determine what the inventors actually invented. The inventors in this case invented an electronic device,

namely a switching device and, more specifically, a transistor of the FET type. Such “device” is structural, as it is well known in the art.

Even if there was any doubt, the holdings in *Metabolite Labs v. Corp of Am Holdings* and *Catalina Mktg. v. Coolsavings.com*, as identified in MPEP 211.02, make clear that the recitation of an “electronic switching device” forms the basis for distinguishing over the prior art to Fontana, as there is no device, especially an electronic switching device, taught in the reference. Moreover, Applicants are relying on this limitation to distinguish over Fontana.

The Fontana reference is simply a disclosure of the characteristics of a film, and has no teaching directing one of ordinary skill to the use of the film in a switching device, especially a transistor or FET. In the absence of such teaching, the claims cannot be anticipated. If the Examiner persists in the rejection, the Examiner is respectfully requested to explain the teaching on which the rejection is based.

More specifically, at age 14, lines 13 to 17 of the original PCT specification for the present US application, Applicant is the first to disclose the technical finding that the level of mobile ionic impurities in a material of the type described in the Fontana et al article can be sufficiently low that the formation of an accumulation layer of field-induced charge carriers at the active semiconductor/dielectric interface of a transistor can be achieved. This is a significant technical teaching. This teaching is not found in the Fontana et al article. Moreover, Applicants submit that it would not have been obvious without this technical teaching. Thus, there would have been no reason to use the material of the Fontana et al article in a transistor such as that described in Papadimitrakopoulos.

Claims 3-10, 14-23, 26 and 27

These claims are patentable at least by virtue of their dependence from claim 2.

Applicants respectfully submit that there is no disclosure in the Fontana et al article with respect to the specific material described therein for the active semiconductor region of an electronic switching device. The inventors could find no disclosure of such a technical teaching in the Fontana et al article. The Examiner is respectfully requested to point out any such teaching on which the rejection is based.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: November 9, 2007